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Wen Ming Ling
Iowa State College

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Is China Treeless

By WEN MING LING
Hinghwa, Fukien, China.

Because there are no records and data to show the exact acreage of the forests of China, the world in general has very little knowledge of her present forest resources. Owing to the lack of transportation which has kept the people from traveling from place to place, even the Chinese themselves know very little about their forests. Articles have been written by many to show how the Chinese in many parts of the country cannot even dig roots and pick up branches for fuel. The recent drought in Northern China leaves the impression that all Chinese mountains might be bare. Floods, occurring frequently in the Northern Yangtze Valley, naturally lead others to think of China as a treeless country. However, while these conditions are true for part of the country, they are not true for other parts. The shortage of timber in China, especially throughout these large treeless sections, is due to the lack of transportation facilities. What merchantable timber there is, is inaccessible to the market.

Historical Facts.

The reader should bear in mind that China has a history of four thousand years. During these forty centuries, it is known that there were about twenty-five bloody revolutions besides numberless local insurrections. Although there is no record to show how these revolutions affected the forests, yet there can be no doubt but that forests must have been destroyed during the course of these events. During the recent Civil War, fighting started in Hinghwa, Fukien between North and South. A group of important historical trees in the city of Hinghwa was destroyed by Northern soldiers. To this destruction the writer was an eye-witness. The illustration only helps in the belief that internal disturbances and Civil Wars must have contributed their due share in changing forest conditions. There is further evidence of this fact in the recent great world war, in which the French forests were so ruthlessly impoverished.

According to records, the Yellow River, "China's Sorrow," once flowing through a rich, fertile valley, its bordering hills well wooded, is today a broad moving quick sand, with only a small amount of water for most of the year. However, when the flood tides come the face of the landscape is entirely changed.

This is the region where floods occurred in 1917, and thousands of villages and towns were wiped out, and thousands of people were drowned. This is the place where forty millions of Chinese farmers today, on account of drought, are facing a most terrible famine. These disastrous consequences are undoubtedly caused by the deforestation, which was probably affected by the Civil Wars; for, historically, the provinces adjoining the Yellow River always served as battle fields.

Forest Regions

In actual forest area, Manchuria, by far, is the leading region. Nature has endowed Manchuria with the largest forests in the world. Recent investigation shows that there are 4,000 square li (one li equals one-third of a mile) of wooded land in Yalu Valley, 3,000 sq. li in the upper basin of the Tumen River, 11,000 sq. li in the region stretching from the upper course of Lin la River to the upper Sin Fen Ho along the Hsiao Chang Pai Sang mountain, 23,000 sq. li in the Misan mountain, 8,000 sq. li in the I Kan Hu Li mountain, and about 6,000 sq. li along the Nan Hsin an Ling range. As they have not been surveyed, it is difficult to give details concerning these areas. It can be said, however, that they cover an extensive area and contain an almost inexhaustible supply of timber, if made available.

The timber trees of first importance in Manchuria are: *Pinus Kariensis*, *Larix* sp., *Picea abovata*, *Acanthopanax ricinifolium*, *Juglans Mandshurica*, *Phellodendron amurense*, *Betula Chinensis* and *Quercus dentata*.

In recent years a number of lumber companies have come into existence, either organized by Chinese or by foreign countries. The bulk of timber cut is spruce and silver fir (60%) and pine (30%) and larch. The areas in which these companies are operating, are usually mountainous and their depths almost unreachable by human beings. The further one penetrates into them, however, the better becomes the quality of timber. The forests in Manchuria will, no doubt, play a great part in building up China's modern industries.

The largest forest in the South of China is in Southern Hunan Province. This province has been from ancient times one of the chief sources of timber for China.

The chief forest region of the province is located in southern Hunan where the people are called Miatze or wild people. They are similar to the American Indians. They were once very prosperous in China but the rapid development of China's civilization has driven them down to the confines of the southern

portion of Hunan Province. Because of being inaccessible for the market, a great portion of these forests are still reserved.

The chief lumber trees here are *Cunninghamia lanceolata*, *Cryptomeria japonica*, *Pinus Masoniana*, and *Quercus glauca*. The chief timber cut is fir which occupies 90% of the total lumber trade.

The total value of the exports is said to exceed \$12,000,000. The carrying on of this trade is attended with trouble and danger, as a period of two or even more years is needed for a merchant to go from Hankow, the exporting center, to the hills and return with the timber. High profits are generally received. A tree which costs some 30 to 50 cashes (10 cashes equals 1 cent) may sell for \$1.00 at Hankow.

Another forest region is on the steep headwaters of the streams running to the coast in Fukien Province. Here, as elsewhere, there is no record to show the extent of the forests. Roughly speaking, 23 districts in Fukien Province are covered more or less by forest. The forests are owned by private individuals and the timber is cut all the year around. The rotation is fifteen to twenty-five years. The native has found it very profitable to practice a short rotation, because the climate and market both are favorable. The propagation is chiefly done by sprouting and shooting. In the plantations, indigo is planted as a filler in order to receive an income for the first few years before the trees bring in a return.

Lumber operations have been carried on extensively for centuries. The Foochow poles (Foochow is the capital of Fukien) are the chief products of the industry. The main supply of this timber has hitherto come from the districts of Yenping, Kienning, Showu and Tinchow. The poles, fir and pine, are transported through various streams, and collected at Nantai, where three modern sawmills are under operation. The American Import and Export Lumber company alone cut 20,000,000 board feet in 1919. The stumpage price is cheap. The writer has been informed that a tree with a diameter of 3 to 4 feet was sometimes sold for 50 cents. This is largely because of the lack of adequate means for transporting it.

The most important species in this region are: *Cunninghamia lanceolata*, *Cryptomeria japonica*, *Pinus Massoniana*, *Quercus glauca* and the like.

One of the most important species in Fukien Province is the camphor tree which, with the introduction of modern methods of cultivation, will run equal competition with Japanese camphor. The camphor industry has been monopolized by the

Japanese government since Formosa Island came into her possession. Formosa, previous to the Chino-Japanese War, was a part of Fukien Province. In spite of the Japanese monopoly, however, Fukien, during the year 1917, exported about 1,064,000 pounds of camphor and 2,600,000 pounds of the oil.

Sechwan is no doubt the leading forest region, as well as the largest province in China proper. The province is one of the most mountainous and rocky regions, and for that reason it served as the most important province from the standpoint of military occupation. This area was once thickly forested. It is stated that the Civil War in the middle of the 17th century destroyed the forests extensively in this province. In the northeast corner is a wild mountainous land, where untouched coniferous forests still exist. Myriads of Tung trees or oil trees cover an area of many miles. There is a considerable timber trade. Wood is remarkably cheap and plentiful, and it is only because coal is so easily available in large quantities that the trees have been spared.

The Central Asia Plateau comes to an end in Western Sechwan. Here the advancing wave of Chinese civilization is gradually pushing back. The independent tribes are still wild. It is supposed that the woods are plentiful, and no one fells them, for the river is no longer navigable and the transport of timber is impossible. The most important species are similar to that of Fukien.

The writer believes the oil tree (*Aleurites fordii*) will furnish one of the greatest forestry by-products of China. The output of wood-oil in China is chiefly produced in Sechwan. The total export of wood-oil from China in the year 1918, reached 488,852 picules (a picule equals 133 1-3 lbs.) with a value of \$5,975,926. The countries to which the wood-oil is shipped are the United States, Great Britain, Germany, the Netherlands, Belgium, and France. The United States, however, has always been the greatest consumer. Her 1918 consumption figured in gold dollars was more than \$5,790,000.

Besides the forest regions thus far enumerated there are a number of others scattered throughout the different parts of China. Being more or less insignificant, in comparison with the larger regions, they are not considered here.

Imports and Exports

The total annual timber consumption in China is unknown. Based on the very conservative consumption of 25 feet per capita, China would consume at least 10,000,000,000 board feet per year. Although there is no record available for figuring the

total timber production in China, roughly speaking, China herself possibly produces 9,000,000,000 board feet per year. Her largest quantities of imported timber in 1916, according to the Chinese Trade Statistics were 223,975,813 sq. feet of soft wood, and 1,891,758 cubic feet of hardwood, with a total value of \$8,050,067. But during the same year, she exported 27,192,691 sq. feet of soft wood, 349,414 cubic feet of hardwood and 1,026,634 pieces of poles, with a total value of \$2,104,335. It is evident therefore, that at least 95% of the annual timber consumption in China is produced within her own borders.

Conclusion

To sum up, let me say that the Chinese are the most economical and conservative wood consumers. For the past four thousand years they have been depending upon wood entirely for fuel, house building and many other uses. They can still preserve a portion of the forest resources to supply at least part of the annual timber consumption, but the future will probably see considerable change in the proportion of production to consumption. The rapid development of modern industries has already increased the demand for lumber and will increase it even more. The present available standing timber will not be able to meet one-tenth of this future timber consumption. China have realized the fact that the shortage of lumber in China is one of the greatest hindrances in the building up of their material civilization, and that deforestation has caused them poverty. Recently, therefore, they have paid a great deal of attention to reforestation. Within the past six years, China has made remarkable progress in reforestation. Forest Service has been inaugurated and forestry laws have been passed. The observance of Arbor Day is spreading rapidly and is becoming of increasing significance. The year 1920 showed much progress over previous years. The outstanding developments of the year were the organization of the Provincial Forestry Service for Shantung Province, the enlarging of the forestry organization in a number of provinces, the extension of forestry work being undertaken by three government railways, increased educational interest in forestry, increased production of forest nursery stock, and the greatly increased number of district magistrates, agricultural societies, small companies and individuals who are undertaking forestry work. The engine of reforestation has the capacity to make the highest speed, and is waiting for the supply of gasoline from the Central Government. The time is coming when China will appropriate millions of dollars for the development of forestry.